

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/Ala Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017921**Date Inspected:** 08-Nov-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower and OBG Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA Inspector) George Goulet was present during the times noted above for observations relative to the work being performed.

**OBG Trial Assembly Area**

This QA Inspector randomly observed the following work in progress in the OBG Trial Assembly Area:

SMAW repair welding of base metal located outside PCMK OBG 11BE and 11CE in the transverse joint area between the two segments, and the weld joint area between bottom plate and side plate, north (crossbeam) side. Welders were identified as 044504, 053871. The same two welders also performed VT repairs of weld joints OBE11B-007, side plate to side plate and OBE11B-008, bottom plate to bottom plate, between the segments. QC was identified as ZPMC CWI Liu Hua Jie (QC1). Welding variables recorded by QC1 appeared to comply with WPS-345-SMAW-4G(4F)-FCM-repair-1 as displayed on ZPMC Weld Repair Report B-CWR1957 presented to this QA Inspector and verbally identified by QC1 and WPS B-P-2214-B-U2-FCM-1.

SMAW welding of weld joints DP719-001-013~018 and DP720-001-007~012 located inside PCMK OBG 11CE/11DE at the transverse joint, deck plate I-rib to deckplate, holdback welds, south (bikepath) side. See photo below. Welder was identified as 050289. QC was identified as QC1. Welding variables recorded by QC1 appeared to comply with WPS-B-T-4114-1 as verbally identified by QC1.

SMAW repair welding of weld joint OBW11B-002 located inside PCMK OBG 11CE/11DE, transverse joint, side plate, north (crossbeam) side. Welder was identified as 040484. QC was identified as QC1. Welding variables

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recorded by QC1 appeared to comply with WPS-345-SMAW-3G(3F)-FCM-1 as displayed on ZPMC Weld Repair Report B-CWR2164, Rev. 1 presented to this QA Inspector and verbally identified by QC1. QC1 informed this QA Inspector that this welding was being performed to correct indications as a result of ZPMC ultrasonic testing. ZPMC Weld Repair Report B-WR16489 did not refer to any specific ZPMC NDT report.

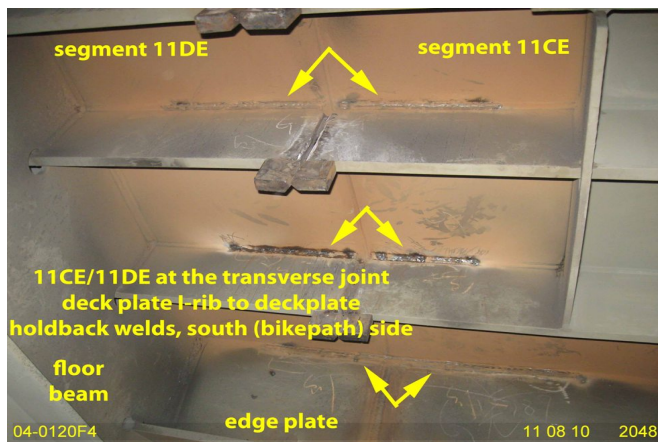
ZPMC personnel performing bolt tightening using an air driven impact gun in OBG segment 11BE between panel point 98 and panel point 99 on side plate flange to side plate flange, north (crossbeam) side.

### Heavy Dock

This QA Inspector randomly observed the following on the Heavy Dock:

All 4 towers, lift 4 were positioned on a base separate pedestal at end of the Heavy Dock. OBG segment 10E was positioned on the deck of the ship moored to the end of the Heavy Dock. OBG segment 10W was positioned on top of OBG segment 10E. All four towers, lift 3 were positioned horizontally on the deck of the ship. OBG CB 13 and CB14 were positioned on the deck of the ship. No welding related work was being performed on any of the tower or OBG components on the Heavy Dock or the ship. However, ZPMC personnel were performing various ancillary tasks on board the ship, such as installation and welding of stanchions at several locations and sandblasting inside the FL3 area of OBG segment 10CE. No ZPMC floating crane was in the area.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



### Summary of Conversations:

As noted above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Micheal Ng, 159-2184-5703, who represents the Office of Structural Materials for your project.

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**Inspected By:** Goulet, George

Quality Assurance Inspector

**Reviewed By:** Carreon, Albert

QA Reviewer